

WHAT IS CLAIMED IS

2 1. In a communication device having discontinuous transmission (DTX)
detection, a method of providing outer loop power control comprising:
4 determining a compensation factor on the basis of a known non-zero $P(D|E)$ value;
 determining an expected target frame error rate (FER); and
6 adjusting the expected target FER on the basis of the determined expected target FER
and the compensation factor.

2 2. The method of claim 1, wherein the outer loop power control is reverse outer
loop power control.

2 3. The method of claim 1, wherein the known non-zero $P(D|E)$ is a constant
value.

2 4. The method of claim 1, wherein the known non-zero $P(D|E)$ is dynamically
determined.

2 5. The method of claim 1, wherein the communication device is a CDMA base
station, base station controller, or mobile station.

2 6. The method of claim 1, wherein the adjusting occurs during non-DTX
occurrences.

2 7. The method of claim 1, further comprising:
 detecting consecutive DTX occurrences; and
 in response to the detection of consecutive DTX occurrences, lowering a power
4 control setpoint associated with the outer loop power control.

8. In a wireless communication device having discontinuous transmission (DTX)
2 detection, a method of providing outer loop power control comprising:
4 detecting consecutive DTX occurrences; and
in response to the detection of consecutive DTX occurrences, lowering a power
control setpoint associated with the outer loop power control.

9. The method of claim 8, wherein the outer loop power control is reverse outer
2 loop power control.

10. The method of claim 8, wherein the wireless communication device is one of
2 a CDMA base station, base station controller, or mobile station.

11. A wireless communication device having discontinuous transmission (DTX)
2 detection and outer loop power control comprising:
4 means for determining a compensation factor on the basis of a known non-zero
P(D|E) value;
6 means for determining an expected target frame error rate (FER); and
means for adjusting the expected target FER on the basis of the determined expected
target FER and the compensation factor.

12. The device of claim 11, wherein the outer loop power control is reverse outer
2 loop power control.

13. The device of claim 11, wherein the known non-zero P(D|E) is a constant
2 value.

14. The device of claim 11, wherein the known non-zero P(D|E) is dynamically
2 determined.

15. The device of claim 11, wherein the wireless communication device is one of
2 a CDMA base station, base station controller, or mobile station.

16. The device of claim 11, wherein the adjusting occurs during non-DTX
2 occurrences.

17. The device of claim 11, further comprising:
2 means for detecting consecutive DTX occurrences; and
4 means for lowering a power control setpoint associated with the outer loop power in
response to the detection of consecutive DTX occurrences.

18. In a wireless communication device having discontinuous transmission (DTX)
2 detection and outer loop power control comprising:
4 means for detecting consecutive DTX occurrences; and
means for lowering a power control setpoint associated with the outer loop power
control on the basis of at least the detecting.

19. The device of claim 18, wherein the outer loop power control is reverse outer
2 loop power control.

20. The device of claim 18, wherein the wireless communication device is one of
2 a CDMA base station, base station controller, or mobile station.

21. In a communication device having discontinuous transmission (DTX)
2 detection, a method of providing outer loop power control comprising:
4 estimating a number of false erasure detections; and
reducing the power control setpoint in proportion to the estimated number of false
erasure detections.

22. The method of claim 21, wherein the power control setpoint is reduced by a
value equal to the estimated number of false erasure detections multiplied by a predetermined
4 downward step size.

23. The method of claim 21, wherein the estimating comprises determining the
2 number of false erasure detections in a state machine comprising:
in an initial state:
4 adjusting the power control setpoint up by a predetermined upward step size
following an erasure frame detection, and
6 adjusting the power control setpoint down by a predetermined downward step size
following a good frame detection;
8 in a first state reached from the initial state following a predetermined number
of consecutive DTX detections in the initial state:
10 adjusting the power control setpoint as in the initial state,
returning to the initial state following the good frame detection, and
12 initializing an S2 counter following the erasure frame detection;
14 in a second state reached from the first state following the erasure frame
detection in the first state:
adjusting the power control setpoint as in the initial state,
16 returning to the initial state and clears the S2 counter following the good frame
detection,
18 initializing an S3 counter upon a DTX detection, and
incrementing the S2 counter following the erasure frame detection; and
20 in a third state reached from the second state following the DTX detection in
the second state:
22 adjusting the power control setpoint as in the initial state,
incrementing the S3 count for each DTX detection while in the third
24 state,
returning to the second state, incrementing the S2 counter, and clearing the S3
26 counter following the erasure frame detection, and
returning to the initial state, resetting the S2 counter, and resetting the S3 counter
28 following the good frame detection.

2 24. The method of claim 23, wherein the estimate of the number of false erasures
is equal to the value of the S2 counter.

2 25. The method of claim 23, wherein the estimate of the number of false erasures
is equal to the value of the S2 counter when the S3 counter equals or exceeds a
4 predetermined value.

2 26. The method of claim 23, wherein the reducing the power control setpoint
involves reducing the power control setpoint by a value equal to the value of the S2 counter
multiplied by the predetermined downward step size multiplied by a constant K.

2 27. The method of claim 26, wherein K equals 1.

2 28. The method of claim 21, the method further comprising:
determining a compensation factor on the basis of a known non-zero $P(D|E)$ value;
determining an expected target frame error rate (FER); and
4 adjusting the expected target FER in response to the determined expected target FER
and the compensation factor.

2 29. The method of claim 28, wherein the compensation factor is equal to $(1 -$
 $P(D|E))$.